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August 15, 1999

Mike Fitzgerald
TerraGraphics Environmental Engineering
108 W. Idaho
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Two page FAX

Dear Mike:

The purpose of this letter is to provide you with my review comments relative to the July 1999 CH2M HILL memo entitled Hydrologic Evaluation of Kellogg Tunnel and South Fork Coeur d'Alene River. My comments are as follows.

1. Page 1, last paragraph. The discussion of water inflow to the mine excludes the 10 level.
2. Page 2, second paragraph. It is probably useful to describe that Kellogg Tunnel was constructed with a slope outward to facilitate drainage. All of the underground workings also were constructed to allow gravity drainage.
3. Page 2, third paragraph. I suggest that the first two sentences be omitted. They do not fit the remainder of the material in this paragraph. Also, I suggest that the third sentence in this paragraph be modified as follows. "...Kellogg Tunnel flows peak in the spring and then decrease to a baseline flow"
4. Page 8, section 3.3. The following should also be mentioned as a possible explanation for the lack of correlation of Kellogg Tunnel flow data and SGCdA flow data. Recharge to the mine comes from precipitation and snowmelt over a very limited range in elevation in two small watersheds. The streamflow data represent watersheds with much greater elevation ranges. The lack of correlation with Placer Creek suggests that most of the major recharge to the mine not from the main channel of Milo Creek.
5. Page 10. It is not clear how the measured flow in the Kellogg Tunnel was separated into the three component parts for this analysis. The first component is water draining from the upper country. The second component is water being pumped from the 11 or 12 levels, versus dewatering to the 31 level as was done in 1973. The third component is water from sand back-filling operations.



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Please contact me if you have questions relative to my comments. Thank you.

Sincerely,

Dale R. Ralston